

CURRICULUM VITAE

HARRY B. RADOUSKY

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EDUCATION:

University of Illinois, Chicago	B.A. in Physics, June, 1976
University of Illinois, Chicago	M.S. in Physics, June, 1978
University of Illinois, Chicago	Ph.D. in Solid State Physics, June 1982

HONORS:

- Fellow of the American Physical Society
- Scientific Editor of LLNL's Science and Technology Review (2006/2007)
- Who's Who in America Science and Engineering, 5th Edition
- Science Citation Classics - among the top 10 cited works in Materials Science for the past decade <http://in-cites.com/papers/DrHarryRadousky.html>.
- LLNL Chem. and Material Science Associate Director Award (March, 2004): For 3 outstanding papers on optical materials published in PRL within 9 months.
- Member of the California State University - Northridge Advisory Board of the Interdisciplinary Materials Science Research Center

WORK HISTORY:

1996 - Present	Deputy Director - University Relations Program Lawrence Livermore National Laboratory
1997 - Present	Adjunct Professor, Department of Physics, UC-Davis
2005 – 2006	Scientific Editor of Science and Technology Review Lawrence Livermore National Laboratory
1982 - Present	Experimental Physicist Lawrence Livermore National Laboratory
2000 - 2002	Director - Laboratory Collaborations UC - Office of the President
2000 - 2001	Acting Director - University Relations Program Lawrence Livermore National Laboratory
1997 - 2000	Founding Director - Materials Research Institute Lawrence Livermore National laboratory
1994 - 1994	Project Manager - (LBL) ER - LTT CRADAs Technology Transfer Department, LBNL
1991 - 1997	Adjunct Associate Professor, Department of Physics, UC-Davis

1990 - 1994	Group Leader - Solid State Experiments Physical Sciences Department (H-Division) Lawrence Livermore National Laboratory
1988 - 1991	Task Leader – Superconducting Properties LLNL Superconductivity Program Lawrence Livermore National Laboratory
1987 - 1988	Project Leader – Diagnostic Development Lawrence Livermore National Laboratory
1985 - 1991	Adjunct Lecturer Department of Applied Science University of California, Davis
1982 - 1982	Postdoctoral Appointment Argonne National Laboratory,

SELECTED ADMINISTRATIVE ACHIEVEMENTS:

- Founded the LLNL Materials Research Institute (1997)
- Established the Lawrence Post-Doctoral Fellowship (1998)
- Established the LLNL Sabbatical Scholars Program (2001)
- Expanded the LLNL Student Employee Graduate Research Fellowship (SEGRF) Program to include all UC Campuses (2001)
- Established the Campus-Lab-Exchange Program (2001)
- Established the National Ignition Facility (NIF) Professorship between UCLA and LLNL (2002, position filled in 2005)
- Established the Lawrence Livermore Summer Internship Program (2004)
- Established the University Education partnership Program (2005)

TEACHING EXPERIENCE:

- UC-Davis Department of Applied Science (College of Engineering):
 - Graduate level Solid-state Physics (Fall 1985-Spring 1986, Spring 1987)
 - Graduate course in Superconductivity (Spring 1988)
- UC-Davis Physics Department:
 - Electro-magnetic Properties of Superconductors, Spring 1994
 - Physics of Baseball, Fall 1996, Spring 1999, Spring 2002, Spring 2004

UC - DAVIS GRADUATE STUDENTS

- Graduated 2 Ph.D. students - (Christopher Wren Carr and Mark Bennahmias)
- Mentored 11 UC-Davis Ph.D. students (1987 – 2004)

Current Ph.D. Students

- Paul DeMange, UC Davis

UCLA ENGINEERING GRADUATE STUDENTS

- Mentored 1 UCLA Ph.D. student (graduated June, 2005)

RECENT POSTDOCTORAL FELLOW ADVISEES

- Wonyoung Choe, Currently an Assistant Professor at the University of Nebraska
- Stavros Demos, Currently a staff member at LLNL

RECENT LETTER PUBLICATIONS

- C.W. Carr, H.B. Radousky, A.M. Rubenchik, M.D. Feit, S.G. Demos, **Localized dynamics during laser-induced damage in optical materials.** *PRL* **92**, 87401, 2004.
- N. Nersessian, S. Or, G. P. Carman, W. Choe, H.B. Radousky, M. McElfresh, V. K. Pecharsky and A. O Pecharsky, **A New $Gd_5Si_2Ge_2$ Composite for Actuator Applications.** *Applied Physics Letters*, **84**, 4801 (2004).
- A. E. Berkowitz, H. Harper, D. J. Smith, H. Hu, Q. Jiang, V. C. Solomon and H. B. Radousky, "Hollow Metallic Microspheres Produced by Spark Erosion", *Applied Physics Letters*, **85**, 940, 2004.
- C.W. Carr, A.M. Rubenchik, H.B. Radousky, P. DeMange, S.O. Kucheyev, S. Oberhelman, M.D. Shirk, M.D. Feit, S.G. Demos, **Emission from Ultra-dense Plasma Produced by Femtosecond Radiation**, *Optics Letters*, **30**, 661, 2005
- P. DeMange, C. W. Carr, R. A. Negres, H. B. Radousky, and S. G. Demos , "Multi-wavelength investigation of laser-damage performance in KDP and DKDP following laser annealing" *Optics Letters*, **30**, 221, 2005

SELECTED RESEARCH ACHIEVEMENTS:

High Pressure Research

- *Discovery of shock-induced cooling (nitrogen).* *PRL* (1986) Current groups still modeling these results and performing follow-on experiments.

Superconductivity and Magnetism

- Suppression of superconductivity in YBCO₇ with the addition of Pr for Y - Performed key experiments and developed a model, which elucidates this phenomenon. Results detailed in 20 publications spanning 1989 – 1999. Review paper written in 1991 among top ten cited (334) material science publications for the period 1991 – 2001.

Laser Damage in Optical Materials

Recent set of 3 PRLs (July 2003-March 2004) provide breakthrough experiments and theory for understanding this type of laser-matter interaction. Overall since 1998, 18 papers including the 3 PRLs, 3 Optics Letters, and 3 Applied Physics Letters.

LLNL PROGRAMMATIC EXPERIENCE:

- 10 years experience doing high pressure/high temperature equation of state using the two-stage light gas gun and DACs (Condensed Matter Physics Division).
- 10 years experience working on laser induced damage in KDP relevant to the National Ignition Facility (NIF).

CONFERENCE ORGANIZATION AND SESSIONS CHAIRED

- Member of the organizing committee of the 1987 Conference on Shock Waves in Condensed Matter, Monterey, CA July 20-23, 1987.
- Organized UC-Davis - LLNL Biotechnology Collaboration Forum I, Feb. 10, 1995
- Organized UC-Davis - LLNL Biotechnology Collaboration Forum II, June 23, 1995
- Organized UC-Davis - LLNL Biotechnology Collaboration Forum III, March 29, 1996
- Organized UC-Davis - LLNL Workshop on Homeland Security, November 4, 2004.
- Organizing comm. for the Internat'l Workshop on Electron Correlations, June, 1998
- Organizing Committee for the Tri-Lab Course on Dislocations, June 1998
- Organizing Committee for Physics by the Bay Meeting, September 25, 1999

- Organizing Committee for Physics by the Bay Meeting, September 16, 2000
- Co-Chair CLC Novel Materials Workshop, LLNL Materials Research Institute, September 13-14, 1999
- Session Chair for High Density Materials, 1987 Shockwave Meeting, Monterey, CA
- Session chair for Heavy Fermions, 1995 March APS Meeting, San Jose, CA.
- Session Chair for Semiconductors: Optical Properties and Spectroscopy of Structured Semiconductors 2000 March APS Meeting, Minneapolis, MN.

RECORDS OF INVENTION:

1. *Halogenated High T_c Superconductors and Method of Preparation*, H. B. Radousky, R. S. Glass M. J. Fluss, LLNL File Number IL-8411.
2. *High Density Nano-Scale Josephson Junction Arrays*, H. B. Radousky and M. J. Bennahmias, LLNL File Number IL-9693.
3. *Energy Harvesting Using A Thermoelectric Material* N. Nersessian, H. B. Radousky and G. P. Carman, LLNL File Number IL-11328. Filed as a provisional patent in March, 2004 and as a full patent in March, 2005.

PROFESSIONAL ORGANIZATIONS:

- Member of American Physical Society, Division of Condensed Matter Physics
- Member of the Materials Research Society
- Member SPIE

INVITED REVIEWS, BOOKS, AND BOOK CHAPTERS:

1. M. Ross and H. B. Radousky, "Physics of Simple Molecules at High Density," in **Simple Molecular Systems at High Pressure**, edited by A. Polian, P. Loubeyre and N. Boccara (Plenum, 1989), p. 47.
2. H. B. Radousky, "A Review of the Superconducting and Normal State Properties, Y_{1-x}Pr_xBa₂Cu₃O₇," Journal of Materials Research Z, 1917 (1992).
3. H. B. Radousky "Magnetism in Pr Containing Cuprates," a chapter in **Magnetic Properties of Heavy Fermion Systems**, ed. H. B. Radousky, 345-368, (World Scientific Publishing, October, 2000).
4. H. B. Radousky (editor) **Magnetic Properties of Heavy Fermion Systems**, (World Scientific Publishing, October, 2000). This is Volume 11 in the series "Modern Condensed Matter Physics."
5. H. B. Radousky and S. G. Demos, "**Getting under the Skin – Deep**" LLNL Science and Technology Review, November, 2000. UCRL – 52000-00-11/12. (www.llnl.gov/str/)

JOURNAL PUBLICATIONS:

1. 1982 Radousky, H.B., T. Jarlborg, G.S. Knapp, and A.J. Freeman. **Assessment of Theoretical Determinations of the Electron-Phonon Coupling Parameter in Metals and Intermetallic Compounds.** Physical Review B26:1208.
2. 1982 Fradin, F.Y., H.B. Radousky, N.J. Zaluzec, G.S. Knapp, and J.W. Downey. **Superconductivity in the Y-Ir System.** Materials Research Bulletin 17:427.
3. 1983 Radousky, H.B., G.S. Knapp, A.T. Aldred, and J.S. Kouvel. **Superconducting and Magnetic Properties of $Y_{0.9}R_{0.1}Rh_4B_4$.** Physical Review B27:4236.
4. 1983 Radousky, H.B., D.G. Niarchos, B.D. Dunlap, and G.S. Knapp. **Heat Capacity Studies of Crystal Field Effects in RRh_4B_4 Compounds.** Physical Review B27:5526.
5. 1983 Radousky, H.B., A.T. Aldred, G.S. Knapp, and J.S. Kouvel. **Unusual Critical Field Behavior in $Y_{1-x}Er_xRh_4B_4$.** Physical Review B28:2850.
6. 1983 Radousky, H.B., G.S. Knapp, J.W. Downey, A.T. Aldred, and A.J. Freeman. **Magnetic Properties of $HfZn_2$.** Journal of Magn. Magn. Materials 40:117.
7. 1984 Holmes, N.C., H.B. Radousky, M.S. Moss, and W.J. Nellis. **Silica at Ultra High Temperature and Expanded Volume.** Applied Physics Letters 45:626.
8. 1985 Radousky, H.B., M. Ross, A.C. Mitchell, and W.J. Nellis. **Shock Temperatures and Melting in CsI.** Physical Review B31:145.
9. 1986 Nellis, W.J., H.B. Radousky, T.H. Geballe, R.H. Hammond, R. Koch, and G.W. Hull, Jr. **Superconductivity of Nb Recovered from Megabar Dynamic Pressures.** Applied Physics Letters 49:413.
10. 1986 Radousky, H.B., W.J. Nellis, M. Ross, D.C. Hamilton, and A.C. Mitchell. **Molecular Dissociation and Shock-Induced Cooling in Fluid Nitrogen at High Densities and Temperatures.** Physical Review Letters 57:2419.
11. 1988 Radousky, H.B. and M. Ross. **Shock-Induced Cooling in Dense Fluid Nitrogen.** High Pressure Research 1:39.
12. 1988 Radousky, H.B. and M. Ross. **Shock Temperature Measurements in Dense Fluid Xenon.** Physics Letters A129:43.
13. 1988 Nellis, W.J., D.C. Hamilton, N.C. Holmes, H.B. Radousky, F.H. Ree, and A.C. Mitchell, "The Nature of the Interior of Uranus Based on Studies of Planetary Ices at High Dynamic Pressure," Science 240:779.
14. 1989 Peng, J.L., P. Klavins, R.N. Shelton, H.B. Radousky, P.A. Hahn, L. Bernardez, and M. Costantino. **Preparation, Characterization and Superconducting Properties of Tetragonal $LaBaCaCu_3O_7$.** Physical Review B39:9074.

15. 1989 Radousky, H.B., K.F. McCarty, J.L. Peng, and R.N. Shelton. **Preparation and Raman Analysis of Single Phase $Y_{1-x}Pr_xBa_2Cu_3O_7$** . Physical Review B, Rapid Communications 39:12, 383.
16. 1989 Peng, J.L., R.N. Shelton, and H.B. Radousky. **Preparation of and Magnetic Scattering in $Nd_{2-x}Ce_xCuO_4$** . Solid State Communications 71:479.
17. 1989 McCarty, K.F., H.B. Radousky, D.G. Hinks, Y. Zeng, A.W. Mitchell, T.J. Folkerts, and R.N. Shelton. **Electron-Phonon Coupling in Superconducting $Ba_{0.6}K_{0.4}BiO_3$: A Raman Scattering Study**. Physical Review B, Rapid Communications 40:2662.
18. 1989 Peng, J.L., R.N. Shelton, H.B. Radousky, P.A. Hahn, and A.L. Bernardez. **Upper Critical Field and Normal State Properties of Single Phase $Y_{1-x}Pr_xBa_2Cu_3O_7$ Compounds**. Physical Review B40:4517.
19. 1989 Radousky, H.B. and A.C. Mitchell. **A Fast UV/Visible Pyrometer for Shock Temperature Measurements to 20,000 K**. Review Scientific Instruments 60:3707.
20. 1990 Peng, J.L., R.N. Shelton, and H.B. Radousky. **Kondo Effect and Superconductivity in $Nd_{2-x}Ce_xCuO_4$ Compounds**. Physical Review B41:187.
21. 1990 McCarty, K.F., J.Z. Liu, R.N. Shelton, and H.B. Radousky. **Raman-active Phonons of a Twin-Free $YBa_2Cu_3O_7$ Crystal: A Complete Polarization Study**. Physical Review B41:8792.
22. 1990 Radousky, H.B., R.S. Glass, P.A. Hahn, M.J. Fluss, R.G. Meisenheimer, B.P. Bonner, C.I. Merzbacher, E.M. Larson, K.D. McKeegan, J.C. O'Brien, J.L. Peng, R.N. Shelton, and K.F. McCarty. **Metallization and Superconducting Properties of $YBa_2Cu_3O_{6.2}Br_y$** . Physical Review B41:11140.
23. 1990 Bonner, B.P., R.L. Reichlin, H.B. Radousky, T.J. Folkerts, and R.N. Shelton. **Anomalous Pressure Dependence of Optical Reflectivity in the Superconductor $Ba_{1-x}K_xBiO_3$** . Physical Review B41:11576.
24. 1990 Radousky, H.B. and A.C. Mitchell. **Shock Temperature Measurements and Planetary Ices: NH_3 , CH_4 , and Synthetic Uranus**. Journal of Chemical Physics 93:8235.
25. 1990 McCarty, K.F., J.Z. Liu, R.N. Shelton, and H.B. Radousky. **Electronic Raman Scattering of $YBa_2Cu_3O_7$ Using C-Axis Polarization: Evidence for Two Characteristic Superconducting Energies**. Physical Review B42:9973.
26. 1991 Nellis, W.J., H.B. Radousky, D.C. Hamilton, A.C. Mitchell, N.C. Holmes, K.B. Christianson, and M. Van Thiel. **Equation-of-State, Shock Temperature and Electrical Conductivity Data of Dense Fluid Nitrogen in the Region of the Dissociative Phase Transition**. Journal of Chemical Physics 94:2244.

27. 1991 Phillips, N.E., R.A. Fisher, R. Caspara, A. Amato, H.B. Radousky, J.L. Peng, L. Zhang, and R.N. Shelton. **Magnetic Ordering, Hyperfine and "Linear" Contributions to the Low-Temperature Specific Heat of $(Y_{1-x}Pr_x)Ba_2Cu_3O_{7-d}$** . Physical Review B, Rapid Communications B43: 11488.
28. 1991 McCarty, K.F., H.B. Radousky, J.Z. Liu, and R.N. Shelton. **Temperature Dependence of the Linewidths of the Raman-Active Phonons of $YBa_2Cu_3O_7$; Evidence for a Superconducting Gap Between 440 and 500 cm⁻¹**. Physical Review B, Rapid Communications 43:13751.
29. 1991 Yoo, C.S., H.B. Radousky, N.C. Holmes, and N.M. Edelstein. **Luminescence of Sm²⁺ Ions as a Probe of the Pressure-Induced Phase Transition in SrF₂**. Physical Review B44:830.
30. 1991 McCarty, K.F., J.Z. Liu, Y.X. Jia, R.N. Shelton, and H.B. Radousky. **Effect of Gold-Doping on the Energy Gap of $YBa_2Cu_3O_7$ as Determined by Raman Scattering**. Solid State Communications 79:359-362.
31. 1992 Wang, Y., A.M. Rao, J.G. Zhang, X.X. Bi, P.C. Eklund, M.S. Dresselhaus, P.P. Nguyen, J.S. Moodera, G. Dresselhaus, H.B. Radousky, R.S. Glass, M.J. Fluss, and J.Z. Liu. **ab-Plane Optical Properties of $YBa_2Cu_3O_{7-\delta}Bry$ Single Crystals**. Physical Review B45:2523-2526.
32. 1992 McCarty, K.F., J.Z. Liu, Y.X. Jia, R.N. Shelton, and H.B. Radousky. **Comparison of the Raman-Active Phonons of $YBa_2Cu_3O_7$ Crystals Grown in Gold and Zirconia Crucibles**. Physica C192:331-350.
33. 1992 Tobin, J.G., C.G. Olson, C. Gu, J.Z. Liu, F.R. Solal, M.J. Fluss, R.H. Howell, J.C. O'Brien, H.B. Radousky, and P.A. Sterne. **Valence Bands and Fermi-Surface Topology of Untwinned Single-Crystal $YB_2Cu_3O_{6.9}$** . Physical Review B45:5563-5576.
34. 1992 Radousky, H.B. **A Review of the Superconducting and Normal State Properties of $Y_{1-x}Pr_xBa_2Cu_3O_7$** . Journal of Materials Research Z:1917-1955.
35. 1992 Jia, J.X., J.Z. Liu, M.D. Lan, P. Klavins, R.N. Shelton, and H.B. Radousky. **Upper Critical Field H_{c2} of Single-Crystal $Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$** . Physical Review B45:10609-10615.
36. 1992 McCarty, K.F., J.E. Schirber, D.R. Boehme, H.B. Radousky, J.Z. Liu, and R.N. Shelton. **Dependence of the Excitation Wavelength on the Raman-Active Phonons of YBCO₇; Search for Landau Damping in Single Domain Crystals**. Physica C200:315-322.
37. 1992 Lan, M.D., J.Z. Liu, R.N. Shelton, H.B. Radousky, B.W. Veal, and J.W. Downey. **Magnetic Properties of Oxygen-Depleted $YBa_2Cu_3O_{7-y}$ Single Crystals**. Physical Review B46:11919-11922.

38. 1992 McCarty, K.F., J.Z. Liu, Y.X. Jia, R.N. Shelton, and H.B. Radousky. **Temperature Dependence of the Phonon Frequencies, Linewidths, and Raman-Continuum Scattering of Single-Domain $Y_{0.56}Pr_{0.44}Ba_2Cu_3O_7$** . Physical Review B46:11958.
39. 1992 Bennahmias, J., C. O'Brien, H.B. Radousky, T.J. Goodwin, P. Klavins, J.M. Link, C.A. Smith, and R.N. Shelton. **Magnetic, Structural, and Raman Characterization of $RBa_2Cu_2NbO_8$ ($R = Pr, La$, and Nd)**. Physical Review B46:11986.
40. 1992 Goodwin, T.J., H.B. Radousky, and R.N. Shelton. **Superconducting, Magnetic, Electronic Transport and Structural Properties of $R_{1.5}Ce_{0.5}Sr_2Cu_2NbO_{10'}$ $R=Pr, Nd, Sm$, and Eu**. Physica C204:212-224.
41. 1993 Rosov, N., J. W. Lynn, H. B. Radousky, M. Bennahmias, T. J. Goodwin, P. Klavins, and R. N. Shelton. **Crystal Structure and Magnetic Ordering of the Rare Earth and Cu Moments in RBCNO ($R = Nd$ and Pr)**. Physical Review B47:15256-15264.
42. 1993 Nguyen, P. P., Z. H. Wang, A. M. Rao, M. S. Dresselhaus, J. S. Moodera, G. Dresselhaus, H. B. Radousky, R. S. Glass, and J. Z. Liu. **Transport and Magnetic Properties of $YBa_2Cu_3O_{6.2}Br_y$ Single Crystals**. Physical Review B48:1148-1155.
43. 1993 Park, S. J., J. S. Kouvel, H. B. Radousky, and J. Z. Liu. **Cross-Flux Effect as a Vortex Pinning Process in $YBa_2Cu_3O_7$ and $Y_{0.8}Pr_{0.2}Ba_2Cu_3O_7$ Crystals**. Physical Review B48:13998-14000.
44. 1993 Bennahmias, M., A. F. Bello, D. Back, H. B. Radousky, T. J. Goodwin, P. Klavins, and R. N. Shelton. **Magnetic Properties of Polycrystalline $R_{1.5}Ce_{0.5}Sr_2CnbO_{10}$ ($R = Eu, Nd$, and Sm) High- T_c Superconducting Ceramics**. Physical Review B48:6525-6532.
45. 1994 Lorenzana, H. E., M. Bennahmias, H. B. Radousky, and M. B. Kruger. **Producing Diamond Anvil Cell Gaskets for Ultrahigh-Pressure Applications Using an Inexpensive Electric Discharge Machine**. Review of Scientific Instruments 65:3540-3543.
46. 1996 Cheng, S.C., V.P. Dravid, T.J. Goodwin, R.N. Shelton, and H.B. Radousky. **Determination of the Valence of Pr in $(Eu_{1.5-x}Pr_x)Ce_{0.5}Sr_2Cu_2NbO_{10}$ Superconducting Compounds by Electron-Energy-Loss Spectroscopy**. Physical Review B53:11779-11783.
47. 1996 Bennahmias, M., H.B. Radousky, M. Buford, A. Kebede, M. McIntyre, T.J. Goodwin, and R.N. Shelton. **Magnetic Studies of Ta Doping in $Pr_{1.5}Ce_{0.5}Sr_2Cu_2NbO_{10}$** . Physical Review B53:2773-2780.

48. 1996 Bello, A.F., H.B. Radousky, and D.J. Erskine. **Separating the Coherent and Incoherent Effects in Optical Correlation Experiments on Semiconductors and Other Saturable Absorbers.** Review of Scientific Instruments 67:503-511.
49. 1996 Hasan, M.K., J.S. Kouvel, H.B. Radousky, T.J. Goodwin, and R.N. Shelton. **Vortex Pinning in Polycrystalline $\text{Eu}_{1.5-x}\text{Pr}_x\text{Ce}_{0.5}\text{Sr}_2\text{Cu}_2\text{NbO}_{10}$ from Rotational Magnetic Measurements.** Physica C270:216-222.
50. 1997 Goodwin, T.J., H.B. Radousky, R.N. Shelton, M. Bennahmias, J. Lynn, and N. Rosov. **Magnetic Properties in $\text{Eu}_{1.5-x}\text{Pr}_x\text{Ce}_{0.5}\text{Sr}_2\text{Cu}_2\text{NbO}_{10}$.** Physical Review B55:3297.
51. 1997 Goodwin, T.J., R.N. Shelton, and H.B. Radousky. **Relating Structural Properties and Oxygen Content to the Electronic and Magnetic States of $(\text{Eu}_{1.5-x}\text{Pr}_x\text{Ce}_{0.5})\text{Sr}_2\text{Cu}_2\text{NbO}_{10-\delta}$.** Physica C282:745-746.
52. 1997 Goodwin, T.J., R.N. Shelton, H.B. Radousky, N. Rosov, and W.J. Lynn. **Pr and Cu Magnetism in $(\text{Pr}_{1.5}\text{Ce}_{0.5})\text{Sr}_2\text{Cu}_2\text{M}_{10-\delta}$ ($\text{M} = \text{Nb}, \text{Ta}$): Correlations with a Suppression of Superconductivity.** Physical Review B55:3297-3307.
53. 1997 Goodwin, T.J., H.B. Radousky and R.N. Shelton. **Superconductivity and Magnetism in $(\text{R}_{1.5-x}\text{Pr}_x\text{Ce}_{0.5})\text{Sr}_2\text{Cu}_2\text{NbO}_{10-\delta}$, $\text{R} = \text{Nd}, \text{Sm}, \text{Eu}$: Criteria for Modeling the Suppression of Superconductivity by Pr in High T_c Cuprates.** Physical Review B56:5144-5147.
54. 1997 Goodwin, T.J., H.B. Radousky, and R.N. Shelton. **Structural Properties and Oxygen Stoichiometry of $(\text{Pr}_{1.5}\text{Ce}_{0.5})\text{Sr}_2\text{Cu}_2\text{TaO}_{10-\delta}$ and $(\text{R}_{1.5-x}\text{Pr}_x\text{Ce}_{0.5})\text{Sr}_2\text{Cu}_2\text{NbO}_{10-\delta}$, $\text{R} = \text{Nd}, \text{Sm}, \text{Eu}$ - Correlations with Electronic and Magnetic Properties.** Journal of Solid State Chemistry 133:445-457.
55. 1997 Lorenzana, H.E., J.E. Klepeis, M.J. Lipp, W.J. Evans, H.B. Radousky, and M. vanSchilfgaarde. **High-Pressure Phases of PbF_2 : A Joint Experimental and Theoretical Study.** Physical Review B 56:543-551.
56. 1998 Staub, U., L. Soderholm, R. Osborn, T.J. Goodwin, H.B. Radousky, and R.N. Shelton. **Magnetic Ground State of Pr in $(\text{Pr}_{1.5}\text{Ce}_{0.5})\text{Sr}_2\text{Cu}_2\text{NbO}_{10-x}$.** Journal of Physics-Condensed Matter 10:4637-4643.
57. 1998 Demos, S.G., M. Yan, M. Staggs, J.J. DeYoreo, and H.B. Radousky. **Raman Scattering Investigation of KH_2PO_4 Subsequent to High Fluence Laser Irradiation.** Applied Physics Letters 72:2367-2369.
58. 1999 Bennahmias, M., H.B. Radousky, H.E. Lorenzana, T.J. Goodwin, and R.N. Shelton. **Raman and Magnetic Susceptibility Evidence for a Structural Transition in $(\text{Eu}_{1.5-x}\text{Pr}_x\text{Ce}_{0.5})\text{Sr}_2\text{Cu}_2\text{NbO}_{10}$ Compounds.** Journal of Raman Spectroscopy 30:543-545.

59. 1999 Demos, S.G., M. Staggs, M. Yan, H.B. Radousky, and J.J. De Yoreo. **Microscopic Fluorescence Imaging of Bulk Defect Clusters in KH_2PO_4 Crystals.** Optics Letters 24:268-270,271-U7.
60. 1999 Demos, S.G.; M. Staggs, M. Yan, H.B. Radousky, and J.J. De Yoreo. **Investigation of Optically Active Defect Clusters in KH_2PO_4 Under Laser Photoexcitation.** Journal of Applied Physics 85:3988-3992
61. 2000 Demos, SG; Burnham, A; Wegner, P; Norton, M; Zeller, L; Runkel, M; Kozlowski, MR; Staggs, M; Radousky, HB.. Surface defect generation in optical materials under high fluence laser irradiation in vacuum. Electronics Letters 36:566-567.
62. 2000 Demos, SG; Radousky, HB; Alfano, RR. **Deep subsurface imaging in tissues using spectral and polarization filtering.** Optics Express, 7:23-28.
63. 2001 S. G. Demos, Staggs, J. J. De Yoreo, H.B. Radousky, Imaging of laser-induced reactions of individual defect nano-clusters. Optics Letters 26, 24-27.
64. 2001 Garces, NY; Stevens, KT; Halliburton, LE; Demos, SG; Radousky, HB; Zaitseva, NP. **Identification of electron and hole traps in KDP crystals,** Journal of Applied Physics, 89:47-52.
65. 2002 Qing Zhang, Nicholas Kioussis, Stavros Demos, Harry Radousky, Ab initio study of the electronic structure and phase transition in KDP, Phys. Rev. B 65, 24108 .
66. 2002 Qing Zhang, Nicholas Kioussis, Stavros Demos, Harry Radousky, New Evidence of the Displace Feature of the Ferroelectric Transition in KDP-type Crystals, Journal of Physics: Condensed matter 14, 1-5.
67. 2002 S. G. Demos, , M. Staggs, and H. B. Radousky, Endoscopic Method For Large-Depth Optical Imaging Of Interior Body Organs. Electronics Letters, V38(N4):155-157.
68. 2002 H. Jiang, J. McNary, H. W. K. Tom, M. Yan, H. B. Radousky, and S. G. Demos, **Nanosecond time-resolved multi-probe imaging of laser damage in transparent solids.** Applied Physics Letters 81, 3149.
69. 2003 S.G. Demos. M. Staggs, H.B. Radousky, Bulk defect formations in KH_2PO_4 crystals investigated using fluorescence microscopy. Physical Review B, 67, 4102.
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71. 2003 M.M Chirila, N.Y. Garces, L.E. Halliburton, S.G. Demos, T.A. Land, H.B. Radousky, Production and Thermal Decay of Radiation-induced Point Defects in KD_2PO_4 Crystals. Journal of Applied Physics, 94, 6456.

72. 2003 C.S. Liu, Nicholas Kioussis, S.G. Demos, H.B. Radousky, **Electron- or Hole-assisted Reactions of H Defects in Hydrogen-bonded KDP.** Physical Review Letters, 91, 15505.
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75. 2004 J. Carrey, H.B. Radousky, A.E. Berkowitz, **Spark-eroded Particles: Influence of Processing Parameters.** Journal of Applied Physics, 95, 823.
76. 2004 A. E. Berkowitz^a, H. Harper, David J. Smith, Hao Hu, Qian Jiang, and Virgil C. Solomon and H.B. Radousky, "**Hollow Metallic Microspheres Produced by Spark Erosion**", Applied Physics Letters, 85, 940.
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78. 2004 P. DeMange, H. B. Radousky and S. G. Demos, "**System for Evaluation of laser-induced damage performance of optical materials for large aperture lasers**", Review of Scientific Instruments, 75, 3298.
79. 2004 N. Nersessian, S. Or, G. P. Carman, W. Choe, H.B. Radousky, M. McElfresh, V. K. Pecharsky and A. O Pecharsky, "**A New $Gd_5Si_2Ge_2$ Composite for Actuator Applications**". Applied Physics Letters, 84, 4801
80. 2005 C.W. Carr, M. D. Feit, A.M. Rubenchik, H.B. Radousky, P. DeMange, S.O. Kucheyev, S. Oberhelman, M.D. Shirk, M.D. Feit, S.G. Demos, **Emission from Ultra-dense Plasma Produced by Femtosecond Radiation.** Optics Letters, 30, 661.
81. 2005 W. Choe, H.B. Radousky, M. McElfresh, J. Carrey, A.E. Berkowitz, S. Sinha, Z. Islam, D.R. Lee, **Observation of Magnetostriction of Terfenol-D by Synchrotron X-ray Powder Diffraction.** [Submitted to Journal of Magnetism and Magnetic Materials \(June, 2005\)](#)
82. 2005 P. DeMange, C. W. Carr, R. A. Negres, H. B. Radousky, and S. G. Demos , "**Multi-wavelength investigation of laser-damage performance in KDP and DKDP following laser annealing**" Optics Letters, 30, 221.
83. 2005 C.S. Liu, C. J. Hou, Nicholas Kioussis, S.G. Demos, H.B. Radousky, **Electronic structure calculations of an oxygen vacancy in KH_2PO_4 .** Physical Review B, 72, 4110.

SEMINARS AND INVITED TALKS

1. "Magnetic Superconductors, A Study in Conflict and Compromise," invited talk given at LLNL, August 6, 1982.
2. "Temperature Measurements in Shock Compressed Materials," invited talk given at the ACS Meeting, Albuquerque, NM, June 6-8, 1984.
3. "High Pressure Positron Measurements of Fe in a Diamond Anvil Cell," invited talk given at Université de Geneve, Geneva, Switzerland, Sept. 9, 1984.
4. "Emission Spectroscopy of Shock Compressed Materials," invited talk given at the ACS Meeting, Chicago, IL, Sept. 8-13, 1985.
5. "Optical Emission Spectroscopy of Shocked Materials," invited talk given at the 1986 Gordon Conference on Research at High Pressures, Meriden, NH, June 23-27, 1986.
6. "Shock-Induced Cooling in Dense Fluids," invited talk given at the 1987 Shock Wave meeting, Monterey, CA, July 20-23, 1987.
7. "Shock-Induced Cooling in Dense Fluids," Solid State Physics Seminar given at the University of Illinois, Chicago Department of Physics on October 14, 1987.
8. "Shock Wave Studies of Dense Fluids," Solid State Physics Seminar given at the University of California, Davis Department of Physics of December 3, 1987.
9. "Shock-Induced Cooling in Dense Fluids," Colloquium given at the University of California, Davis Department of Applied Science on December 9, 1987.
10. "Phase Transitions at Ultra High Pressure," invited talk given at Emory University, Department of Physics, May 13, 1988.
11. "Preparation and Superconducting Properties of Single Phase $Y_{1-x}Pr_xBa_2Cu_3O_7$, invited talk given at the 7th DOE Informational Meeting on High T_c Superconductors, January 19, 1989.
12. "Flux Creep in High T_c Superconductors," Solid State Physics Seminar given at UC-Davis, Department of Physics, April 12, 1989.
13. "Modification of Superconducting Properties by Elemental Substitutions," Seminar at U. of Tokyo, November 7, 1989.
14. "Recent Results on $Y_{1-x}Pr_xBa_2Cu_3O_7$ and Other Stories," invited talk given at Argonne National Laboratory on March 30, 1990.
15. "Superconducting Properties of High T_c Oxides," colloquium given at University of California, Davis, Department of Applied Science on April 3, 1990.

16. "High T_c Superconductivity," Invited lecture at the LLNL/UC-Davis Summer Institute in Applied Physics, August 13-24, 1990.
17. "Destruction of Superconductivity in Y_{1-x}Pr_xBa₂Cu₃O₇," Colloquium given at University of Illinois, Chicago on April 3, 1991.
18. "High T_c Superconductivity, "Invited lecture at the LLNL/UC-Davis Summer Institute in Applied Physics, June 12, 1991.
19. "Destruction of Superconductivity in Y_{1-x}Pr_xBa₂Cu₃O₇," Colloquium given at University of California, Davis, Applied Science Department on February 11, 1992.
20. "Destruction of Superconductivity in Y_{1-x}Pr_xBa₂Cu₃O₇," Colloquium given at University of California, Davis, Department of Physics, on February 21, 1992.
21. "Introduction to High T_c Superconductivity", invited speaker at Chabot College, Hayward, CA, June 1, 1992.
22. "Effects of f-electron hybridization in YPrBCO and related structures", Solid State Seminar, The Israeli Institute of Technology (Technion), December 29, 1992.
23. "Superconductivity and Magnetism in Three Related Structures, PrBCO, PrBCNO and PrCeSCNO", University of Illinois, Chicago, April 9, 1993.
24. "Introduction to High T_c Superconductivity", invited speaker at Chabot College, Hayward, CA, May 20, 1993.
25. "Superconductivity and Magnetism in Three Related Structures, PrBCO, PrBCNO and PrCeSCNO", Northwestern University, June 24, 1993.
26. "Superconductivity and Magnetism in Three Related Structures, PrBCO, PrBCNO and PrCeSCNO", invited talk at the 2nd International Conference on f-elements, Helsinki, Finland, August, 1994.
27. "Introduction to High T_c Superconductivity", colloquium speaker at the University of San Francisco, November 3, 1994.
28. "Introduction to High T_c Superconductivity", colloquium speaker at the California State University, Hayward, January 20 1995.
29. "Femtosecond Spectroscopy in Biophysics", invited talk at the LLNL/UC-Davis Biotechnology Collaboration Forum, February 10, 1995.
30. "Superconducting and Magnetic Properties in RPrCeSCNO ", invited talk at the 8th International Conference on Superlattices, Microstructures and Microdevices Cincinnati, Ohio August 22, 1995

31. "Laser Induced Damage in Non-Linear Optical Crystals", colloquium speaker at Purdue University, March 6, 1998.
32. "Laser Induced Damage in KDP Crystals", colloquium speaker at California State University, Northridge, April 1, 1998.
33. "Research within the University/LLNL Institutes", invited speaker at the National Physical Science Consortium (NPSC) Annual Meeting, San Diego, Ca, May, 1998.
34. Hongbing Jiang, Harry W.K. Tom, Ming Yan, Harry Radousky, Jim DeYoreo, and Stavros Demos, "Time -resolved studies of laser damage processes in KDP crystals", *30th Annual symposium on optical materials for high power lasers*, Boulder, Colorado, October 4-7, 1999. Invited Talk.
35. "Deep Sub-Surface Imaging for Cancer Detection", UC-Davis Physics Department Student Seminar Series, Davis, Ca, May 23, 2000.
36. "Laser-induced Damage in KDP and other Examples of Research in the LLNL Institutes", University of Alaska, Fairbanks, May 3, 2001.
37. "Understanding Laser Damage in Optical Materials – A Journey From Materials Science To Plasma Physics, UC-Davis Physics Department Seminar, June 6, 2002.
38. "Magnetostrictive Materials for Actuator and Energy-Harvesting Applications" invited colloquium at Pacific Northwest National Laboratories, September 7, 2004.
39. "Research Opportunities for Students at LLNL" invited seminar at UC-Santa Cruz, November 2, 2004.
40. "Magnetostrictive Materials for Actuator and Energy-Harvesting Applications" invited colloquium at California State University, Northridge, February 10, 2005.
41. "Research Opportunities for Students at LLNL" invited seminar at UC-San Diego, May 26, 2005.
42. "Research Opportunities for Students at LLNL" invited seminar at UC-Davis, June 14, 2005.

OTHER PUBLISHED WORK:

1. 1981 Radousky, H.B., G.S. Knapp, J.S. Kouvel, T.E. Kippert, and J.W. Downey. **Magnetic Correlations in ErRh_4B_4 . Ternary Superconductors**. Edited by Shenoy, Dunlap, and Fradin (North Holland), p. 151.
2. 1984 Radousky, H.B., R.L. Reichlin, and R.H. Howell. **High Pressure Positron Annihilation Studies of Fe in a Diamond Anvil Cell**,

Proceedings of Physics and Physicochemistry of Highly Condensed Matter, Aussois, France, J. de Physique 68:309.

3. 1984 Nellis, W.J., N.C. Holmes, A.C. Mitchell, M. Van Thiel, H.B. Radousky, D.C. Hamilton, and S. Henning. **Properties of the Planetary Materials He, SiO₂, and N₂ at High Dynamic Pressures and Temperatures.** Journal de Physique C8:105.
4. 1985 Radousky, H.B., R.L. Reichlin, and R.H. Howell. **High Pressure Doppler Broadening Measurements Performed on Iron in a Diamond Anvil Cell.** Proceedings of 7th International Conference on Positron Annihilation, Delhi, India. Edited by Jain, Singru, and Gopinathan (World Scientific), p. 83.
5. 1986 Nellis, W.J., D.C. Hamilton, R.J. Trainor, H.B. Radousky, A.C. Mitchell, and N.C. Holmes. **Fluids at High Dynamic Pressures and Temperatures.** Physica 139 & 140B:565.
6. 1985 Nellis, W.J., H.B. Radousky, W.C. Moss, A.C. Mitchell, E. Dalder, L. Summers, M.B. Maple, and M. McElfresh. **Superconducting Critical Temperatures of Nb Recovered from Mbar Dynamic Pressures.** Physica 135B:240.
7. 1986 Radousky, H.B., A.C. Mitchell, W.J. Nellis, M. Ross. **Shock Temperature Measurements in Ammonia.** Proceedings of the APS Conference on Shock Waves, Spokane, WA. Edited by Y.M. Gupta (Plenum), p. 467.
8. 1986 Nellis, W.J., W.C. Moss, H.B. Radousky, A.C. Mitchell, L.T. Summers, E.N. Dalder, M.B. Maple, and M. McElfresh. **Properties of Niobium Recovered from Megabar Dynamic Pressures.** Proceedings of the APS Shock Wave Meeting, Spokane, WA. Edited by Y.M. Gupta (Plenum), p. 719.
9. 1986 Nellis, W.J., N.C. Holmes, H.B. Radousky, and D. Hamilton. **Properties of Condensed Matter at High Shock Pressures.** Proceedings of the 15th Shock Tube Symposium, Berkeley, CA. Edited by Bershader and Hanson (Stanford University Press), p. 15.
10. 1988 H.B. Radousky, **Shock-Induced Cooling in Dense Fluids**, in Shock Waves in Condensed Matter. Edited by N. Holmes and S. Schmidt (North Holland), p. 89.
11. 1988 Hamilton, D.C., W.J. Nellis, N.C. Holmes, H.B. Radousky, F.H. Ree, and M. Nicol. **Electrical Conductivity and Equation of State Measurements on Planetary Fluids at High Pressures and Temperatures**, in Shock Waves in Condensed Matter. Edited by N. Holmes and S. Schmidt (North Holland) p. 99.

12. 1989 Ross, M. and H.B. Radousky. **Physics of Simple Molecules at High Density**, in Simple Molecular Systems at High Pressure. Edited by A. Polian, P. Loubeyre, and N. Boccara (Plenum), p. 47.
13. 1989 Radousky, H.B., P.A. Hahn, J.L. Peng, and R.N. Shelton. **Magnetic Pair Breaking in $\text{Y}_{1-x}\text{Pr}_x\text{Ba}_2\text{Cu}_3\text{O}_7$** . Proceedings of the International M²S-HTSC Conference, Stanford, CA, July 23-28, Physica C162-164:89.
14. 1989 Folkerts, T.J., R.N. Shelton, and H.B. Radousky. **Preparation and Characterization of Single Phase $\text{Ba}_{1-x}\text{K}_x\text{BiO}_3$** . Submitted to Proceedings of the International M²S-HTSC Conference, Stanford, CA, July 23-28. Physica C162-164:550.
15. 1989 Peng, J.L., R.N. Shelton, and H.B. Radousky. **Superconductivity and Magnetic Scattering in the $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_4$ Compounds**. Proceedings of the International M²S-HTSC Conference, Stanford, CA, July 23-28. Physica C162-164:1363.
16. 1989 Howell, R.H., H.B. Radousky, A.L. Wachs, M.J. Fluss, P.E.A. Turchi, Y.C. Jean, C.S. Sundar, C.W. Chu, R.N. Shelton, and D.G. Hinks. **Systematics in Positron Annihilation Lifetime Analysis of High T_c Superconducting Transitions**. Proceedings of the International M²S-HTSC Conference, Stanford, CA, July 23-28. Physica C162-164:1377.
17. 1990 Peng, J.L., R.L. Greene, P. Klavins, R.N. Shelton, and H.B. Radousky. **Thermogravimetric Analysis of $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_{4-w}$** . Proceedings of the MRS 169:173.
18. 1990 Amato, A., R. Caspary, R.A. Fisher, N.E. Phillips, H.B. Radousky, J.C. Peng, L. Zhang, and R.N. Shelton. **Specific Heat of $\text{Y}_{1-x}\text{Pr}_x\text{Ba}_2\text{Cu}_3\text{O}_7$: Magnetic Ordering and Hyperfine Fields**. Physica B165&166:1347.
19. 1991 Radousky, H.B., R.S. Glass, D. Back, A.H. Chin, M.J. Fluss, J.Z. Liu, W.D. Mosley, P. Klavins, and R.N. Shelton. **Processing Parameters and Kinetics of Bromination and Chlorination in the $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ System**. IEEE Transactions on Magnetics 27:2512.
20. 1991 O'Brien, J.C., R.H. Howell, H.B. Radousky, P.A. Sterne, D.A. Hinks, T.J. Folkerts, and R.N. Shelton. **Positron Life Time Studies of Defect Structures in $\text{Ba}_{1-x}\text{K}_x\text{BiO}_3$** . Proceedings of the MRS 209:877.
21. 1991 Olsen, C.G., J.G. Tobin, F.R. Solal, C. Gu, J.Z. Liu, M.J. Fluss, R.H. Howell, J.C. O'Brien, H.B. Radousky, and P.A. Sterne. **High Resolution Photoemission Studies of Untwinned YBCO_{6.9}**. J. Phys. Chem. Solids 52:1419.

22. 1991 Phillips, N.E., R.A. Fisher, D.A. Wright, A. Amato, R. Caspary, H.B. Radousky, J.L. Peng, L. Zhang, and R.L. Shelton. **Magnetic Ordering, Hyperfine and "Linear" Contributions to the Low-Temperature Specific Heat of $(Y_{1-x}Pr_x)Ba_2Cu_3O_{7-d}$** . Physica C185-189:1069.
23. 1991 Jia, Y.X., J.Z. Liu, M.D. Lan, P. Klavins, R.N. Shelton, and H.B. Radousky. **Superconducting and Normal State Properties of $(Y_{1-x}Pr_x)Ba_2Cu_3O_{7-d}$ Single Crystals**. Physica C185-189:185.
24. 1992 Howell, R.H., P.A. Sterne, F. Solal, M.J. Fluss, J. Tobin, J. O'Brien, H.B. Radousky, H. Haghghi, J.H. Kaiser, S.L. Rayner, R.N. West, J.Z. Liu, R. Shelton, C.G. Olsen, C. Gu, K. Kitaxawa, and H. Kojima. **Electronic Structure in High Temperature Superconducting Oxides**. Materials Science Forum 105-110:265.
25. 1992 Radousky, H.B., J.C. O'Brien, M. Bennahmias, P. Klavins, T.J. Goodwin, J.M. Link, C.A. Smith, and R.N. Shelton. **Structural and Magnetic Properties of $RBa_2Cu_2NbO_8$ ($R = Pr, La$, and Nd)**. Proceedings of the MRS 275:113.
26. 1993 Radousky, H.B., T. J. Goodwin, and R. N. Shelton. **Absence of Superconductivity in $Pr_{1.5}Ce_{0.5}Sr_2Cu_2NbO_{10}$. A general Correlation with Magnetic Ordering**. Physica C209:155.
27. 1993 Bennahmias, M., H.B. Radousky, T.J. Goodwin, and R.N. Shelton. **Superconductivity and Magnetism in Niobium Doped $YBa_2Cu_3O_7$ Related High T_c Ceramics**. Journal of Electronic Materials 22:1189.
28. 1994 Radousky, H.B., A. F. Bello, D. J. Erskine, L. N. Dinh, M. J. Bennahmias, M. D. Perry, T. R. Ditmire, and R. P. Mariella, Jr. **Femtosecond Probe-Probe Studies of LT-Grown GaAs Near the Band Edge**. Proceedings of the MRS 325:389.
29. 1994 Fisher, R.A., N.E. Phillips, D.A. Wright, H.B. Radousky, J.L. Peng, L. Zhang, and R.N. Shelton. **The Specific Heat of YPrBCO: Effects of Pr^3 Singlet-Ground State Ordering and Pr-O Hybridization**. Physica C235-240:1749.
30. 1995 Radousky, H.B., A. Madden, T. Hagler, K. Pakbaz, H. Lorenzana, W.H.W. Lee, G. Fox, and P. Elliker. **Accelerated Degradation Studies of MEH-PPV**. International SAMPE Technical Conference Series 27:1143.

31. 1997 T. J. Goodwin, R. N. Shelton, and H. B. Radousky. **Relating Structural Properties and Oxygen Content to the Electronic and Magnetic States of $\text{Eu}_{1.5}\text{Ce}_{0.5}\text{Sr}_2\text{Cu}_2\text{NbO}_{10}$** . *Physica* C282-287:745-746.
32. 1998 S. G. Demos, M. Yan, M. Staggs, B. W. Woods, Z. L. Wu, H. B. Radousky and J. J. De Yoreo. **Temperature and Spectral Investigation of Bulk KDP Below Damage Using 355 nm Laser Irradiation**. SPIE 3244:223-227.
33. 1998 B. Woods, M. Yan, J. De Yoreo, M. Kozlowski, and H. B. Radousky. **Photothermal Mapping of Defects in the Study of Bulk Damage in KDP**. SPIE 3244:242-248.
34. 1999 S. G. Demos, M. Staggs, M. Yan, H. B. Radousky and Jim De Yoreo. **Observation of Photoexcited Emission Clusters in the Bulk of KDP and Laser Conditioning under 355 nm Irradiation**. In: Optical Materials for High Power Lasers, A. H. Guenther, Ed. SPIE 3578:509-514.
35. 1999 S. G. Demos, M. Staggs, M. Yan, H. B. Radousky, and Jim De Yoreo. **Investigation of Steady-State and Transient Defect Populations in KH_2PO_4 Subsequent to High Fluence Laser Irradiation**. In: Laser Material Crystal Growth and Nonlinear Materials and Devices, K. I. Schaffers and L. E. Myers, eEds., SPIE, 3610:2-8.
36. 1999 S. G. Demos, H.B. Radousky, and R.R. Alfano. **Subsurface Imaging Using the Spectral Polarization Difference Technique and NIR Illumination**. Optical Tomography and Spectroscopy of Tissue III, B. Chance and R. R. Alfano, Eds., SPIE 3597:406-410.
37. 1999 Hongbing Jiang, Harry W.K. Tom, Ming Yan, H.B. Radousky, Jim DeYoreo, and Stavros Demos, "Time -resolved studies of laser damage processes in DKDP crystals", G. J. Exarhos, A. H. Guenther, M. R. Kozlowski, K. L. Lewis, M. J. Soileau, Eds., SPIE, 3902, 294-298.
38. 1999 S. G. Demos, M. Staggs and H.B. Radousky, "Damage induced material modification in the bulk KDP crystals", G. J. Exarhos, A. H. Guenther, M. R. Kozlowski, K. L. Lewis, M. J. Soileau, Eds., SPIE, 3902, 428-432.
39. 2000 S. G. Demos, M. Staggs, H.B. Radousky, R. R. Alfano, "Instrumentation for subsurface imaging in a clinical environment", R. R. Alfano, Ed., SPIE, 3917, in press.
40. 2000 S. G. Demos, V. Sankaran, M. Staggs, H.B. Radousky, "Imaging depth and spatial resolution using the SPDI technique", Technical Digest, OSA Biomedical Topical Meeting, pp 197-199.
41. 2000 S. G. Demos, V. Sankaran, M. Staggs, H.B. Radousky, "Performance assessment of the SPDI subsurface imaging technique", Summaries of papers presented in CLEO '00, 2000 Technical Digest Series, (Optical Society of America, Washington, D. C.), in press.

42. 2000 S. G. Demos, A. Burnham, M. Kozlowski, M. Staggs, H.B. Radousky, "Spectroscopic investigation of laser-induced material modifications", *Summaries of papers presented in CLEO '00, 2000 Technical Digest Series*, (Optical Society of America, Washington, D. C.), in press.
43. 2001 C.W. Carr, H.B. Radousky, M. , A.M. Rubenchik and S.G. Demos, "Time-resolved spectroscopic investigation of emission observed during damage in the bulk of KDP crystals, G. J. Exarhos, A. H. Guenther, M. R. Kozlowski, K. L. Lewis, M. J. Soileau, Eds., SPIE (in press).
44. 2001 S. Demos, M. Kozlowski, M. Staggs, L. Chase, A. Burnham, H.B. Radousky, "Mechanisms to Explain Damage Growth in Optical Materials," G.J. Exarhos, A.H. Guenther, M.R. Kozlowski, K.L. Lewis, M.J. Soileau, Eds., SPIE, 4347, 277, 2001.
45. 2001 S. Demos, M. Staggs, H.B. Radousky, "Endoscopic Subsurface Imaging in Tissues," J.A. Conchello, C.J. Cogswell, T. Wilson, Eds., SPIE, 4261, 122, 2001.
46. 2002 N. Nersessian, S. W. Or, G. P. Carman, and H. B. Radousky, "Manufacturing and testing of [1-3] nickel / polymer composites" Proc. SPIE Int. Soc. Opt. Eng. 4699, 445.
47. 2002 C. W. Carr, H. B. Radousky, M. C. Staggs, A. M. Rubenchik, M. D. Feit, and S. G. Demos, "Time-resolved spectroscopic investigation of emission observed during damage in the bulk of fused silica and DKDP crystals", Proc. SPIE Int. Soc. Opt. Eng. 4679, 360.
48. 2003 Nersesse Nersessian, Siu W. Or, Gregory P. Carman, Wonyoung Choe, Harry B. Radousky, Vitalij K. Pecharsky, and Alexandra O. Pecharsky, "Temperature - and magnetic-field-induced phase transformation in bulk and composite $Gd_5Si_2Ge_2$ " Proc. SPIE Int. Soc. Opt. Eng. 5053, 25 (2003)
49. 2003 Christopher W. Carr, T. H. McMillian, Mike C. Staggs, Harry B. Radousky, and Stavros G. Demos, "Evolution of bulk damage initiation in DKDP" Proc. SPIE Int. Soc. Opt. Eng. 4932, 429 (2003)
50. 2003 Christopher W. Carr, Harry B. Radousky, and Stavros G. Demos "Experimental study of wavelength-dependent damage threshold in DKDP" Proc. SPIE Int. Soc. Opt. Eng. 4932, 385.
51. 2004 Paul DeMange, Christopher W. Carr, Harry B. Radousky, and Stavros G. Demos "Microscopic characterization of laser-induced damage performance of large-size KDP and DKDP nonlinear crystals" Proc. SPIE Int. Soc. Opt. Eng. 5337, 47.

CONTRIBUTED PAPERS

1. 1980 G. S. Knapp, H. B. Radousky, and T. Klippert, "Heat Capacity Studies of (RE) Rh₄B₄," Bulletin of the American Physical Society 25:233.
2. 1981 H. B. Radousky, T. Jarlborg, G. S. Knapp and A. J. Freeman, "Assessment of Theoretical Determinations of Electron-Phonon Coupling Parameter, g in Metals and Intermetallic Compounds," Bulletin of the American Physical Society 26:211.
3. 1982 A. T. Aldred, H. B. Radousky, G. S. Knapp and J. S. Kouvel, "Superconducting and Magnetic Properties of Y_{0.9}RE_{0.1}Rh₄B₄," Bulletin of the American Physical Society, 27:246.
4. 1982 H. B. Radousky, A. T. Aldred, G. S. Knapp and J. S. Kouvel, "Magnetic Interactions in Y_{1-x}Er_xRh₄B₄," Bulletin of the American Physical Society 27:246.
5. 1983 H. B. Radousky, J. W. Downing, A. T. Aldred, G. S. Knapp and A. J. Freeman, "Magnetic Properties of HfZn₂," Bulletin of the American Physical Society 28:249.
6. 1984 H. B. Radousky, A. C. Mitchell, and W. J. Nellis, "Shock Temperature of CsI," Bulletin of the American Physical Society 29:937.
7. 1985 W. J. Nellis, H. B. Radousky, W. C. Moss and A. C. Mitchell, "Dynamic High Pressure Processing of Materials to one Megabar," Bulletin of the American Physical Society 30:580.
8. 1986 W. J. Nellis, H. B. Radousky, T. H. Geballe and M. B. Maple, "Superconducting Properties of Niobium Recovered from Megabar Shock-Wave Pressure," Bulletin of the American Physical Society 31:803.
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10. 1986 H. B. Radousky, W. J. Nellis and M. Ross, "Dissociative Phase Transition and Shock Cooling in Liquid Nitrogen at High Temperatures and Pressures," Bulletin of the American Physical Society 31:442.
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12. 1986 J. J. Neumeier, M. S. Torikachvili, M. B. Maple, W. J. Nellis, and H. B. Radousky, "Superconducting Properties of Nb and Nb Compounds Recovered from Megabar Dynamic Pressure," Bulletin of the American Physical Society 31:640.

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RESEARCH/FUNDING PROJECTS - 1982-PRESENT:

- 1982-1988 Shock-Temperature Measurements of Simple Molecular Fluids to Megabar Pressures and 20,000 K. Position: Lead Physicist. Funding: DOE - Laboratory Programmatic Research.
- 1984-1985 High Pressure Positron Annihilation Studies of Metals. Position: Project Leader. Funding: DOE - Laboratory Programmatic Research.
- 1986-1988 Advanced Diagnostic Development of Axially Symmetric Magnetic Pressure Gauges. Position: Project Leader. Funding: DOE - Laboratory Programmatic Research.
- 1988-1992 LLNL Superconductivity Program. Position: Task Leader for Experiments. Funding: DOE - Laboratory Directed Research and Development.
- 1989-1991 High Temperature Raman and Positron Annihilation Studies of Oxide Superconductors. Position - Project Leader. Funding: DOE - Laboratory Directed Research and Development.
- 1990-1991 High Pressure Magnetic Studies of Oxide Superconductors. Position: Co-PI. Funding: UC Institute of Geophysics and Planetary Physics.
- 1991-1994 Materials Physics at Short Time Scales. Position - Project Leader. Funding: DOE - Laboratory Directed Research and Development.
- 1992-1993 High Pressure Luminescence Studies of Semiconductors. Position: Co-PI. Funding: UC Institute of Geophysics and Planetary Physics.
- 1993-1995 Magnetic Impurity Studies of High T_c Superconductors. Position: Co-PI. Funding: DOE - Historically Black Colleges and Universities (HBCU) Program.
- 1994-1996 Organic Light Emitting Diodes. Position: Co-PI. Funding: DOE - Laboratory Directed Research and Development.
- 1995-1996 New Resonance Technique for Measuring High Temperature Superconductors. Position: Co-PI. Funding: NSF.
- 1996-1999 Origins of laser damage in crystals of $K(D_xH_{1-x})_2PO_4$. Position - PI for Institute of Laser Sciences and Applications (ILSA) Effort. Funding: LDRD ERI.

- 1997-1997 Time Resolved Spectroscopy for the Study of Heterocyclic Amine Carcinogen Interactions with DNA. Position: PI. Funding: LDRD ERD.
- 1997– 2001 DOE Center for Laser Imaging and Cancer Diagnostics Position: LLNL PI. Funding: DOE Direct, Office of Science
- 1999 – 2002 Plasma Dynamics in KDP. Position – co-PI. Funding: LDRD ERI ILSA/MRI.
- 1999–2002 Medical Imaging for Cancer Detection Position – Co-PI Funding: California Department of Health Services.
- 2002-2003 Damage Initiation and Growth – Position – Co-I Funding LLNL UCDRD
- 2002-2004 Exchange-Coupling in Magnetic Nanoparticles Composites to Enhance Magnetostrictive Properties Position – PI LDRD ERI
- 2003–2005 Synthesis and Magnetostrictive Properties of Ferromagnetic Nanoparticles – Position – LLNL PI UCOP Campus Lab Exchange.
- 2005-2006 Properties of Ferromagnetic Nanoparticles – Position LLNL PI NSF Nanoscience Exploratory Research (NER) Award

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